

Effect of Electrolyte on Synergism of Anionic-Nonionic Surfactant Mixture

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Abstract: In this study, anionic (Sodium Dodecyl Sulfate) and nonionic (Triton X100) surfactants mixture (1:1 mass ratio) were evaluated for synergism in Critical Micelle Concentration (CMC) at different ionic strength values. Interaction between the binary surfactant mixture was studied by surface and interfacial tensions. The composition of mixed micelles and the interaction parameter, β evaluated from the CMC data obtained by both surface and interfacial tensions for different systems using Rubingh's theory were discussed. It has been shown, that the micellization behavior of the mixture was improved significantly in presence of salt in particular after equilibration with shale.

Key words: Surfactant, surface tension, interfacial tension, CMC, ionic strength, adsorption, synergism

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